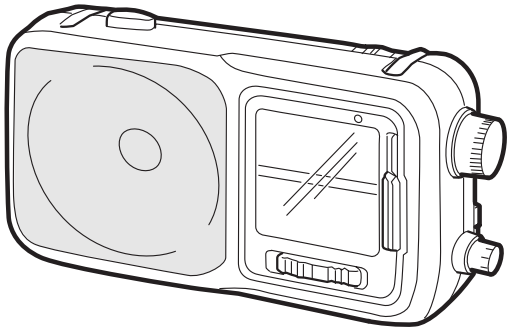
aiwa SERVICE

FR-C52 EZ
FR-C32 EZ



SERVICE MANUAL

RADIO RECEIVER

aiwa

S/M Code No. 09-994-328-7N1

DATA

SPECIFICATIONS

(FR-C52)

Frequency range	FM 87.5 - 108 MHz (FM/SW antenna) SW 5.9 - 18 MHz (FM/SW antenna) MW 530 - 1,605 kHz (Ferrite bar antenna) LW 150 - 285 kHz (Ferrite bar antenna)
Speaker	Diameter 100 mm
Earphone jack	3.5 ø monaural
Power output	570 mW (EIAJ/8 Ω) for built-in speaker
Power requirements	DC 4.5 V using three R6 (size AA) or three R14 (size C) batteries AC 230 V, 50 Hz
Power consumption	2.6 W

Battery life

Manganese	FM	SW/MW/LW
R6P	Approx. 16 hours	Approx. 17 hours
R14P	Approx. 48 hours	Approx. 51 hours

Alkaline	FM	SW/MW/LW
LR6	Approx. 38 hours	Approx. 40 hours
LR14	Approx. 110 hours	Approx. 120 hours

Dimensions	245 (W) x 137.7 (H) x 68.3 (D) mm (9 $^{3}/_{4}$ x 5 $^{1}/_{2}$ x 2 $^{3}/_{4}$ in)
Weight	Approx. 718 g (25.1 oz) excluding batteries

(FR-C32)

Frequency range	FM 87.5 - 108 MHz (FM antenna) AM 530 - 1,605 kHz (Ferrite bar antenna)
Speaker	Diameter 100 mm
Earphone jack	3.5 ø monaural
Power output	570 mW (EIAJ/8 Ω) for built-in speaker
Power requirements	DC 4.5 V using three R6 (size AA) or three R14 (size C) batteries AC 230 V, 50 Hz
Power consumption	2.6 W

Battery life

Manganese	FM	AM
R6P	Approx. 16 hours	Approx. 17 hours
R14P	Approx. 48 hours	Approx. 51 hours

Alkaline	FM	AM
LR6	Approx. 38 hours	Approx. 40 hours
LR14	Approx. 110 hours	Approx. 120 hours

Dimensions	245 (W) x 137.7 (H) x 68.3 (D) mm (9 $^{3}/_{4}$ x 5 $^{1}/_{2}$ x 2 $^{3}/_{4}$ in)
Weight	Approx. 718 g (25.1 oz) excluding batteries

• Design and specifications are subject to change without notice.

ACCESSORIES LIST (FR-C52)

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO		PART NO.	KANRI NO.	DESCRIPTION
	1	S0-302-901-000		INSTRUC,BOOK(EGF)
	1	S0-302-902-000		INSTRUC,BOOK(SID)
	1	S0-302-903-000		INSTRUC,BOOK(PHNCZ)
⚠	2	S1-010-040-201		CORD,POWER AC

ACCESSORIES LIST (FR-C32)

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If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO		PART NO.	KANRI NO.	DESCRIPTION
	1	S0-302-910-000		INSTRUC,BOOK(EGF)
	1	S0-302-911-000		INSTRUC,BOOK(SID)
	1	S0-302-912-000		INSTRUC,BOOK(PHNCZ)
⚠	2	S1-010-040-201		CORD,POWER AC

ELECTRICAL MAIN PARTS LIST (FR-C52)

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

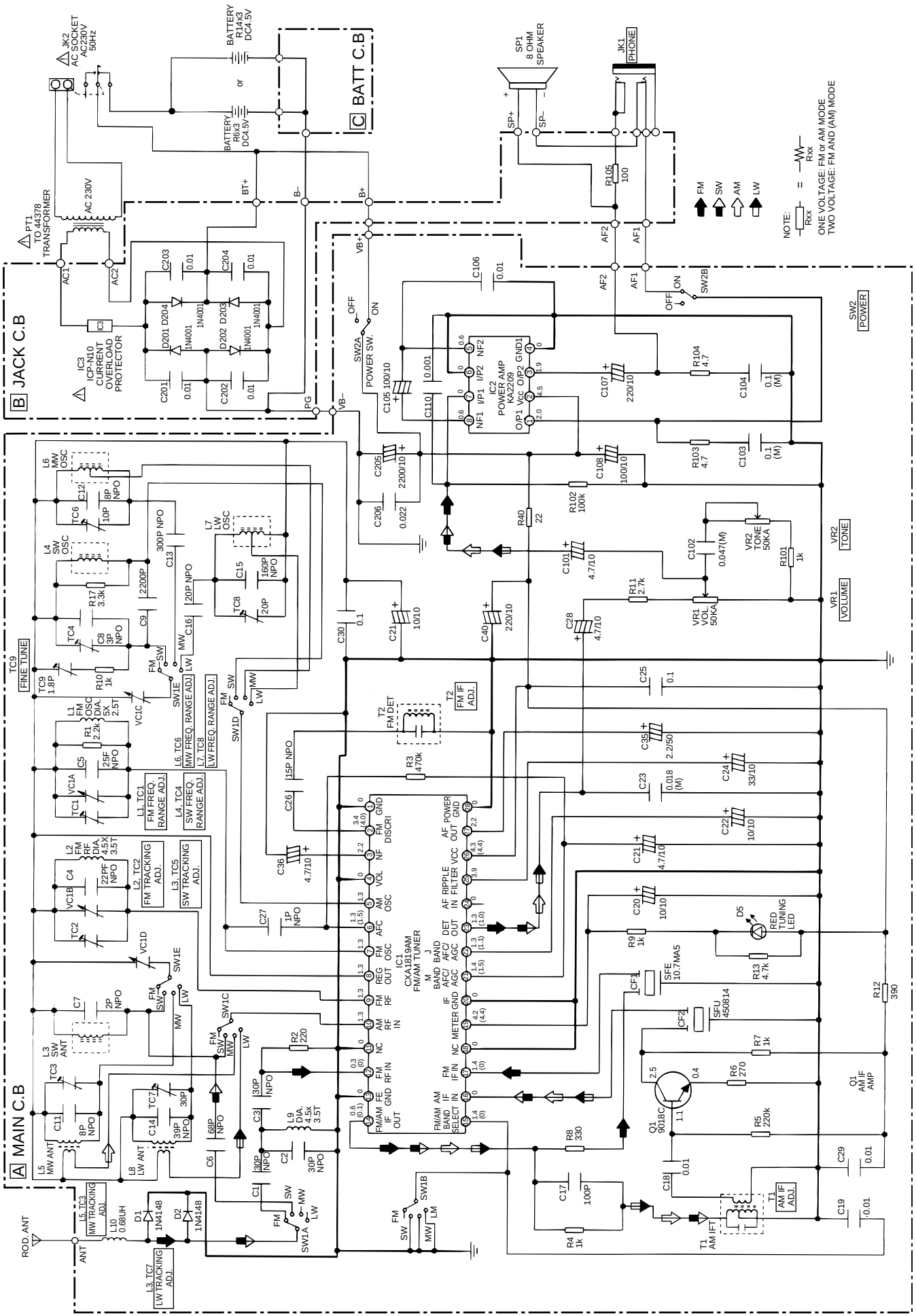
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC			
	S4-316-190-000		IC,CXA1619AM
	S2-522-093-000		IC,KA2209
⚠	87-001-196-080		IC,PROTECTOR ICP-N10
TRANSISTOR			
	S2-901-8G1-000		TR,9018G
DIODE			
	82-135-799-010		DIODE,1N4148
	S5-570-100-100		LED,3.0MM(RED)
	87-001-783-080		DIODE,1N4001
MAIN C.B			
C20	SC-E10-614-280		CAP,E 10UF-10V
C21	87-015-968-040		CAP,E 4.7UF-10V
C22	SC-E10-614-280		CAP,E 10UF-10V
C24	87-010-551-040		CAP,E 33UF-10V
C28	87-015-968-040		CAP,E 4.7UF-10V
C31	SC-E10-614-280		CAP,E 10UF-10V
C35	87-015-696-080		CAP,E 2.2UF-50V
C36	87-015-968-040		CAP,E 4.7UF-10V
C40	87-A10-189-040		CAP,E 220UF-10V
C101	87-015-968-040		CAP,E 4.7UF-10V
C107	87-A10-189-040		CAP,E 220UF-10V
C205	S0-ELT-122-2M0		CAP,E 2200UF-10V
CF1	S2-310-011-700		CER,FILTER 10.7MHZ
CF2	S1-910-010-300		CER,FIL 450K
L1	S1-110-016-100		COIL,SPR FM 5-2.5-5
L2	S1-110-013-600		COIL,SPR FM 4.5-3.5-5
L3	S7-810-022-300		COIL,ANT SW
L4	S1-210-000-300		COIL,OSC SW 7.5-7.5-12
L5	S7-810-022-000		COIL,ANT MW
L6	S1-110-013-100		COIL,OSC AM 7.5-7.5-6
L7	S1-110-013-100		COIL,OSC AM 7.5-7.5-6
L8	S7-810-021-800		COIL,ANT LW
L9	S1-110-013-600		COIL,SPR FM 4.5-3.5-5
L10	87-003-108-010		COIL,0.68UH
SW1	S3-164-001-000		SW,SLIDE SST-64D01-M7-NS
SW2	S2-210-010-300		SW,POWER PUSH
T1	S1-310-100-122		COIL,IFT AM 10-10-13
T2	S3-010-020-100		COIL,DET FM 10-10-13
TC6	S4-010-010-200		CAPACITOR TRIMMER 10PF
TC7	S4-010-010-601		CAP,CER 30PF
TC8	S4-010-010-500		CAP,TRIMMER 20PF
VC1	S2-010-012-200		PVC,AM/FM
VR1	S2-910-011-700		VOL,15A50K
VR2	S1-310-010-800		VOL,ROTARY 50K-A
JACK C.B			
JK1	S1-210-011-500		JACK,HP ST
BATT C.B			

ELECTRICAL MAIN PARTS LIST (FR-C32)

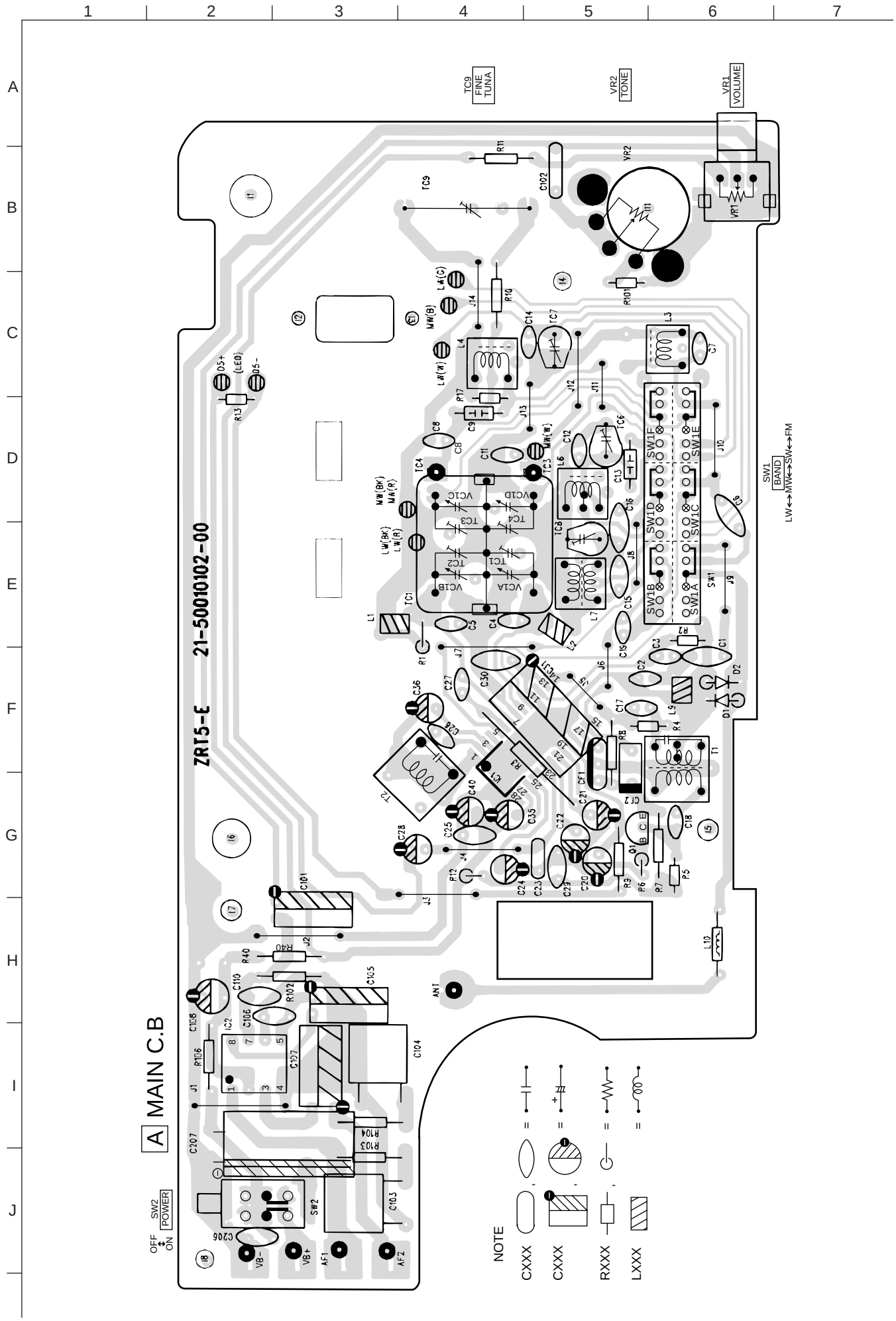
DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC			
	S4-316-190-000		IC,CXA1619AM
	S2-522-093-000		IC,KA2209
⚠	87-001-196-080		IC,PROTECTOR ICP-N10
TRANSISTOR			
	S2-901-8G1-000		TR,9018G
DIODE			
	82-135-799-010		DIODE,1N4148
	S5-570-100-100		LED,3.0MM(RED)
	87-001-783-080		DIODE,1N4001
MAIN C.B			
C15	SC-E10-614-280		CAP,E 10UF-10V
C16	87-015-968-040		CAP,E 4.7UF-10V
C17	SC-E10-614-280		CAP,E 10UF-10V
C19	87-010-551-040		CAP,E 33UF-10V
C21	SC-E10-614-280		CAP,E 10UF-10V
C24	87-015-968-040		CAP,E 4.7UF-10V
C30	87-015-968-040		CAP,E 4.7UF-10V
C31	87-015-696-080		CAP,E 2.2UF-50V
C40	87-A10-189-040		CAP,E 220UF-10V
C101	87-015-968-040		CAP,E 4.7UF-10V
C105	87-010-264-080		CAP,E 100UF-10V
C107	87-A10-189-040		CAP,E 220UF-10V
C108	87-010-264-080		CAP,E 100UF-10V
C205	S0-ELT-122-2M0		CAP,E 2200UF-10V
CF1	S2-310-011-700		CER,FILTER 10.7MHZ
CF2	S1-910-010-300		CER,FIL 450K
L4	S1-110-011-300		COIL,AM OSC 12.5MM
L5	S0-205-710-000		COIL,AM ANT 98:22T
L6	87-003-108-080		INDUCTOR 0.68UH
SW1	S3-122-001-000		SW,SLIDE SSK-22J08-MT-TA
SW2	S2-210-010-300		SW,POWER PUSH
T1	S1-310-100-122		COIL,IFT AM 10-10-13
T2	S3-010-020-100		COIL,DET FM 10-10-13
VC1	S2-010-012-600		PVC,AM-FM 21-21-12
VR1	S2-910-011-700		VOL,15A50K
VR2	S1-310-010-800		VOL,ROTARY 50K-A
JACK C.B			
JK1	S1-210-011-500		JACK,HP ST
BATT C.B			

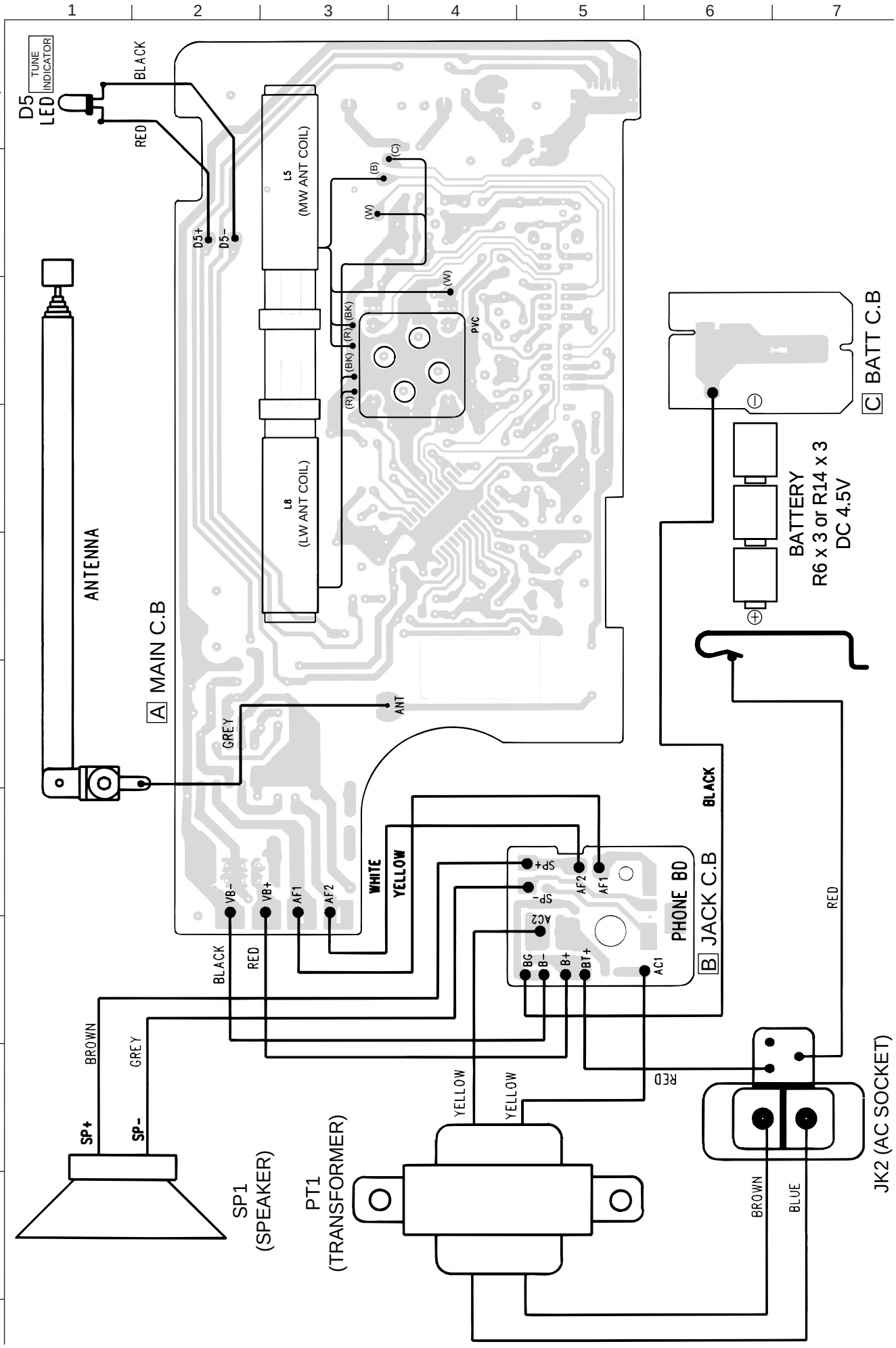
SCHEMATIC DIAGRAM (FR-C52)



CIRCUIT BOARD -MAIN C.B (FR-C52)

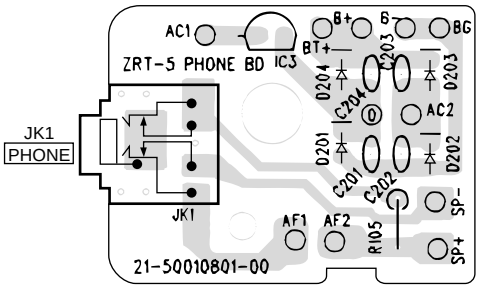


WIRING (FR-C52)



CIRCUIT BOARD -JACK C.B

B JACK C.B



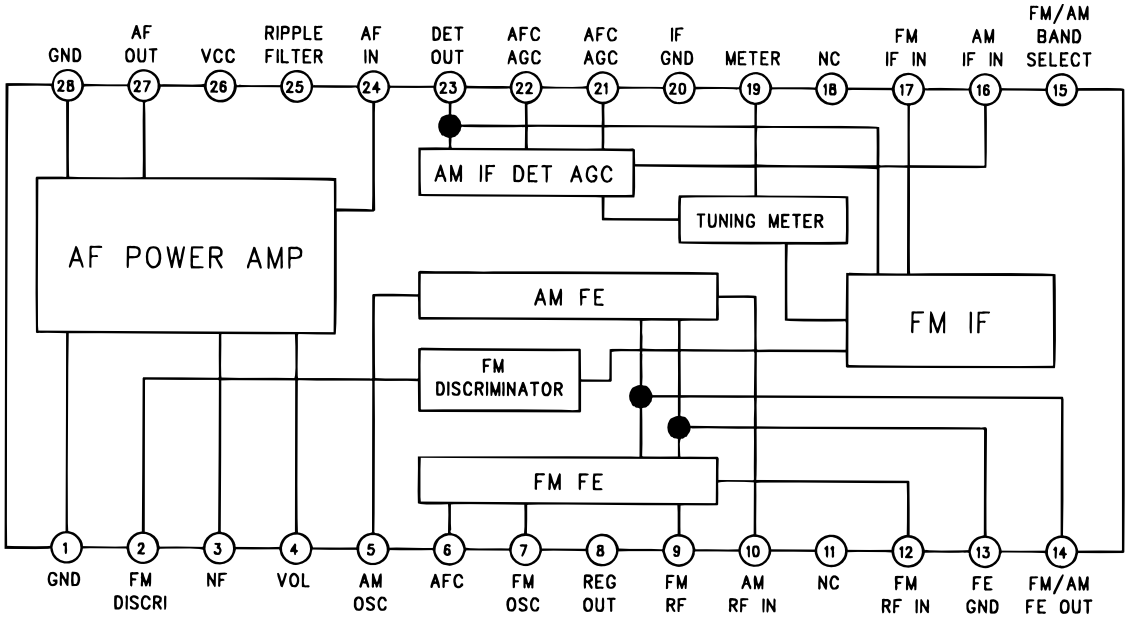
NOTE

CXXX =

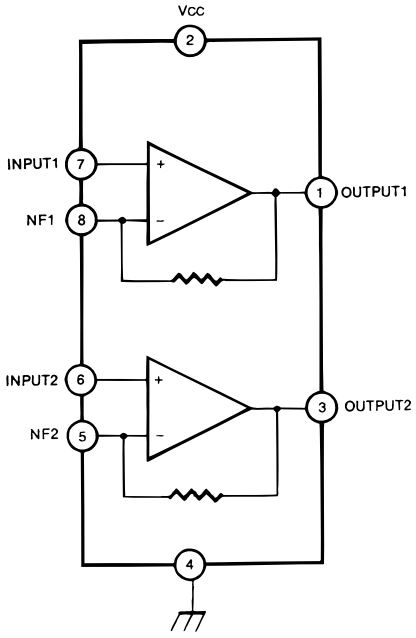
RXXX =

IC BLOCK DIAGRAM

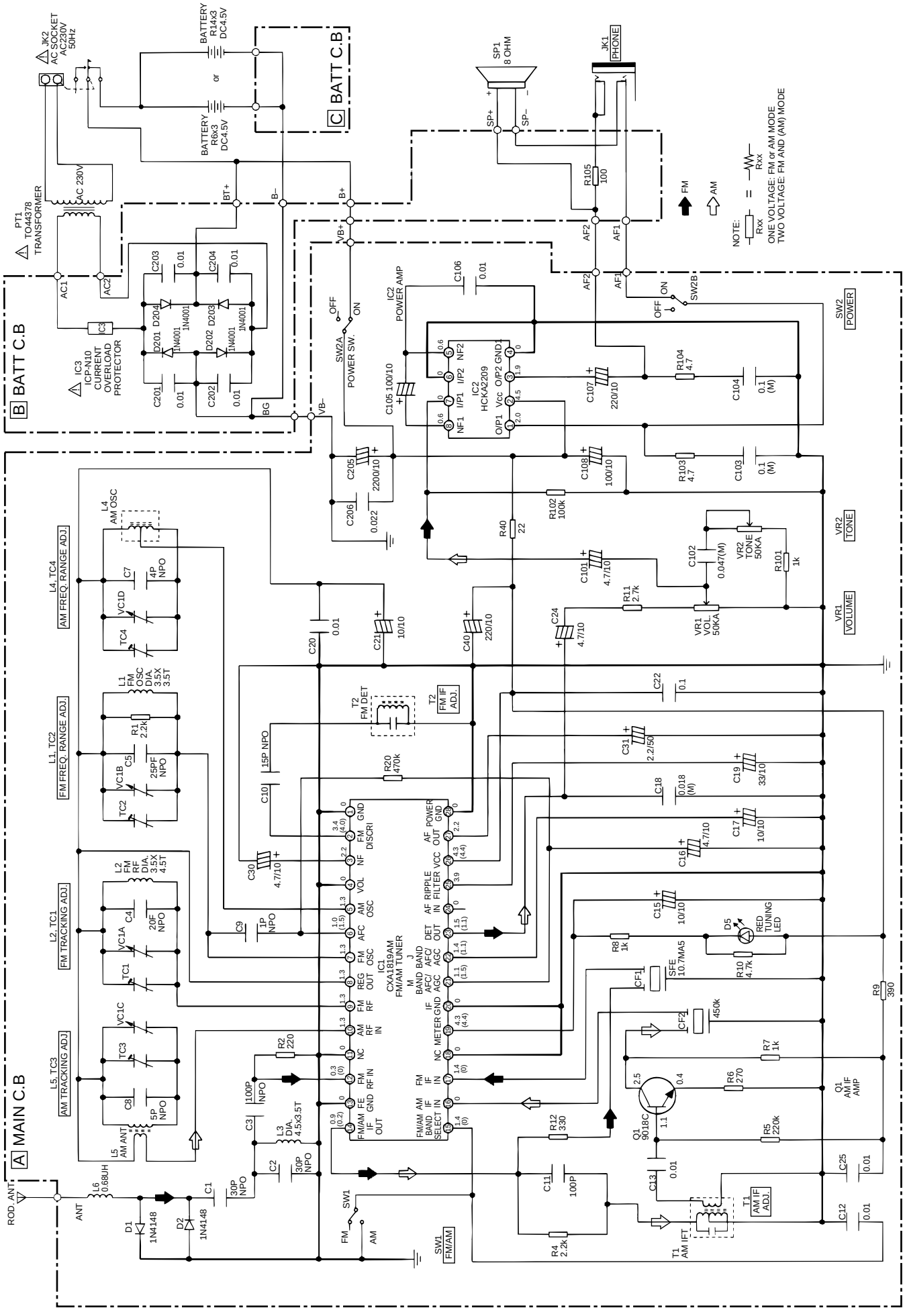
IC, CXA1619AM



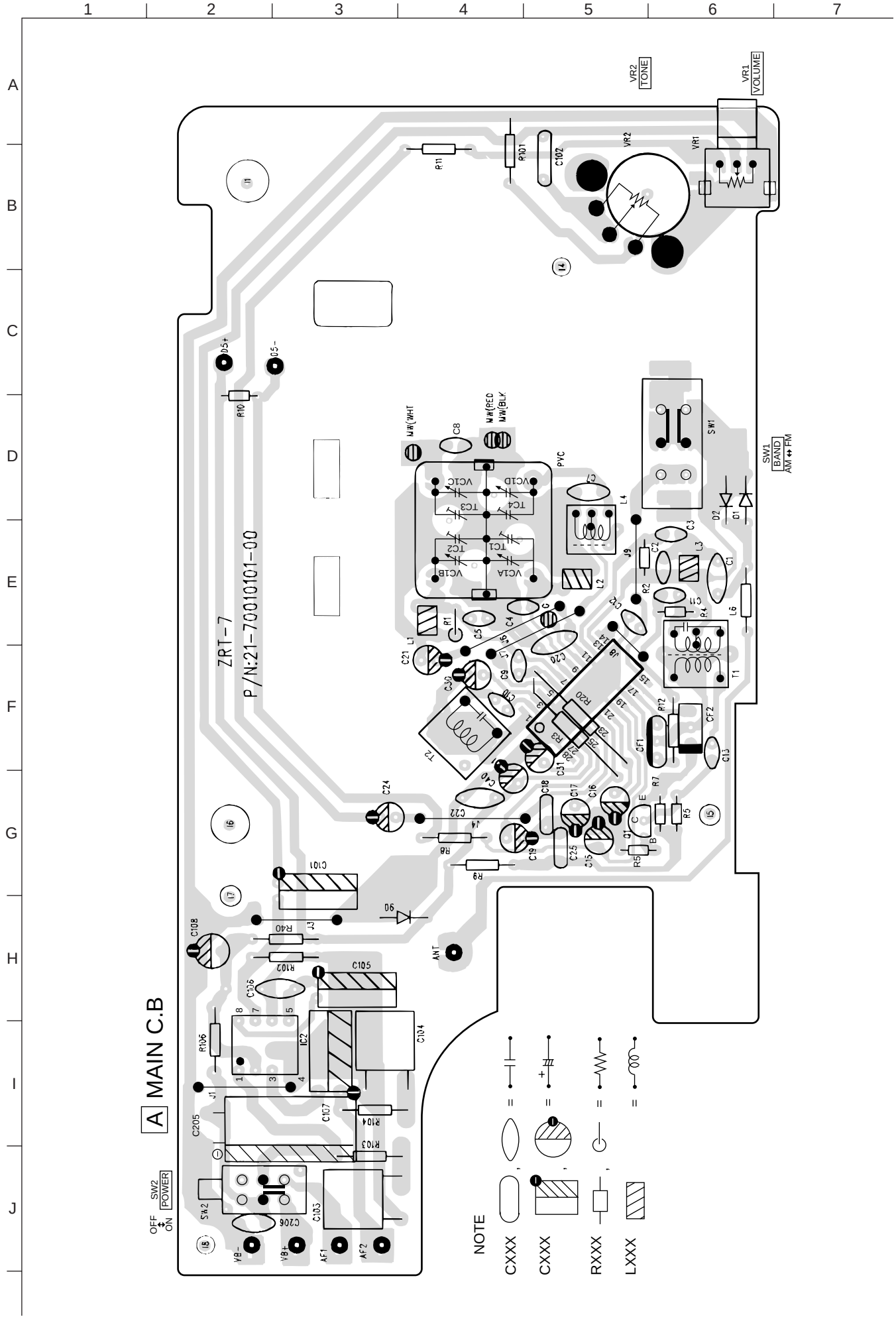
IC, KA2209



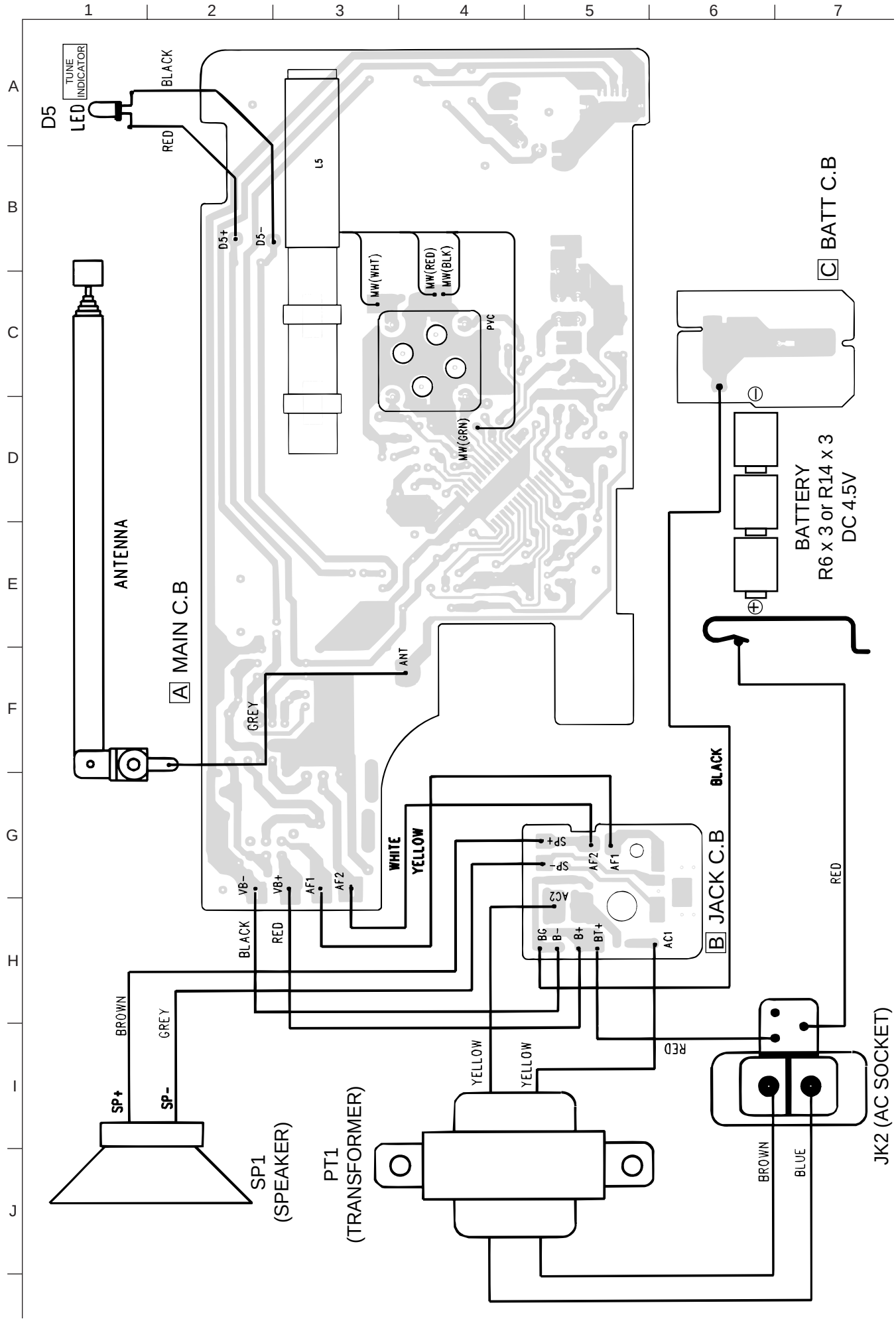
SCHEMATIC DIAGRAM (FR-C32)



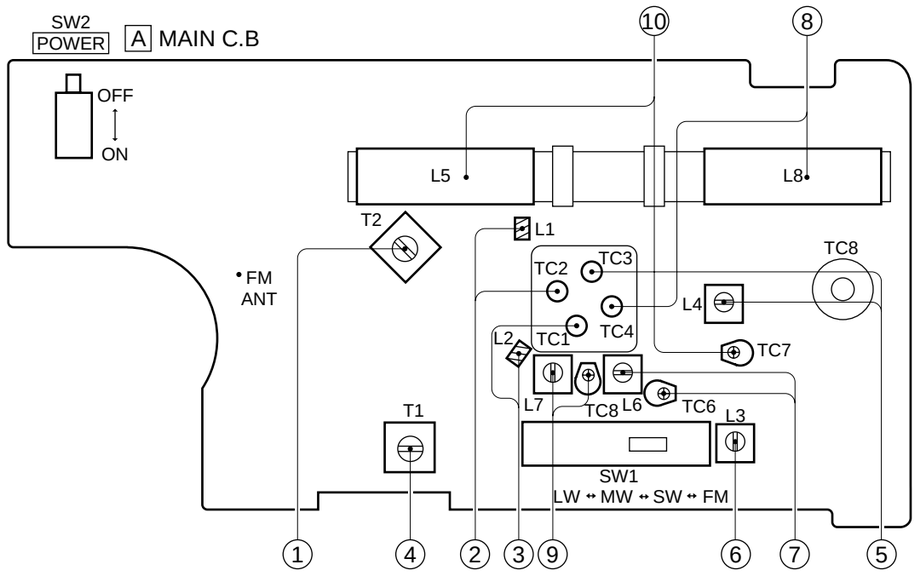
CIRCUIT BOARD -MAIN C.B (FR-C32)



WIRING (FR-C32)



ADJUSTMENT (FR-C52)



1. FM IF Adjustment
   T2 ..... 10.7 MHz

2. FM Frequency Range Adjustment
   L1 ..... 87.4 MHz
   TC2 ..... 108.3 MHz

3. FM Tracking Adjustment
   L2 ..... 88.0 MHz
   TC1 ..... 108.0 MHz

4. AM IF Adjustment
   T1 ..... 450 kHz

5. SW Frequency Range Adjustment
   L4 ..... 5.8 MHz
   TC3 ..... 18.5 MHz

6. SW Tracking Adjustment
   L3 ..... 5.9 MHz

7. MW Frequency Adjustment
   L6 ..... 515 kHz
   TC6 ..... 1,635 kHz

8. MW Frequency Adjustment
   L8 ..... 600 kHz
   TC4 ..... 1,400 kHz

9. LW Frequency Range Adjustment
   L7 ..... 145 kHz
   TC8 ..... 295 kHz

10. LW Frequency Range Adjustment
    L5 ..... 150 kHz
    TC7 ..... 285 kHz

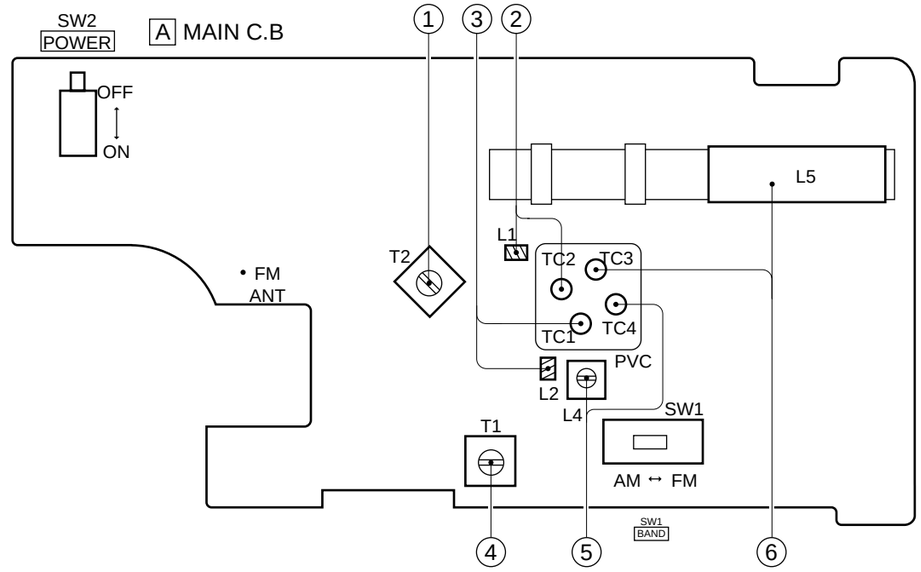
PRACTICAL SERVICE FIGURE (FR-C52)

Sensitivity:

(THD 3%)	FM	Less than 17 dB (88, 98, 108 MHz)
(S/N 10 dB)	SW	Less than 30 dB (5, 9, 12, 18 MHz)
(S/N 10 dB)	MW	Less than 46 dB (600 kHz)
		Less than 44 dB (1,000, 1,400 kHz)
(S/N 10 dB)	LW	Less than 57 dB (150 kHz)
		Less than 55 dB (200, 285 kHz)

Intermediate frequency: FM 10.7 MHz
AM 450 kHz

ADJUSTMENT (FR-C32)



1. FM IF Adjustment
   T2 ..... 10.7 MHz

2. FM Frequency Range Adjustment
   L1 ..... 87.4 MHz
   TC2 ..... 108.3 MHz

3. FM Tracking Adjustment
   L2 ..... 88.0 MHz
   TC1 ..... 108.0 MHz

4. AM IF Adjustment
   T1 ..... 450 kHz

5. AM Frequency Range Adjustment
   L4 ..... 515 kHz
   TC4 ..... 1,635 kHz

6. AM Tracking Adjustment
   L5 ..... 600 kHz
   TC3 ..... 1,400 kHz

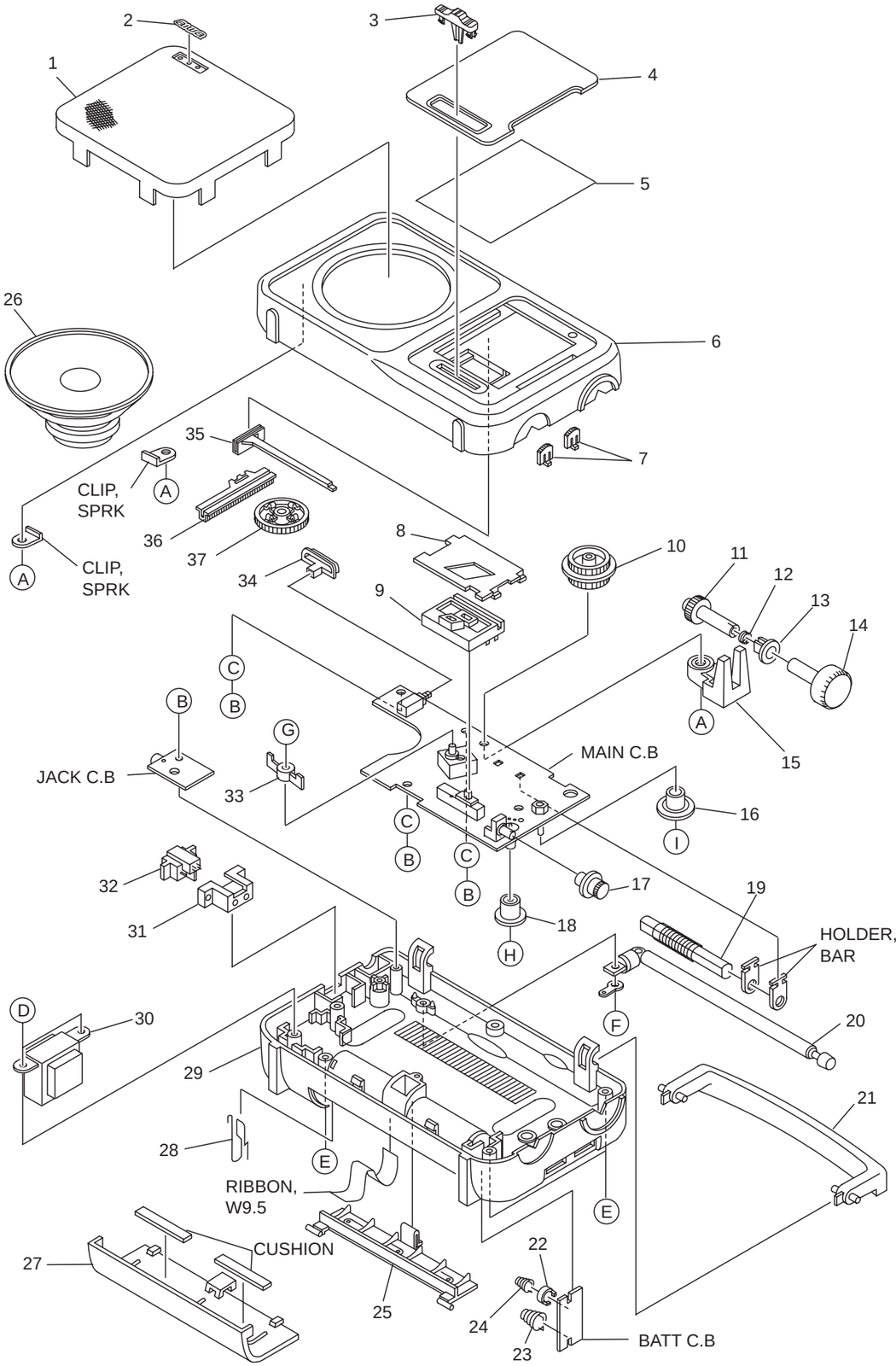
PRACTICAL SERVICE FIGURE (FR-C32)

Sensitivity:

(THD 3%)	FM	Less than 17 dB (88 MHz)
		Less than 17 dB (98 MHz)
		Less than 17 dB (108 MHz)
(S/N 10 dB)	AM	Less than 46 dB (600 kHz)
		Less than 44 dB (1,000 kHz)
		Less than 44 dB (1,400 kHz)

Intermediate frequency: FM 10.7 MHz
AM 450 kHz

MECHANICAL EXPLODED VIEW 1/1



MECHANICAL MAIN PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	S0-900-400-000		SPKR,GRILLE
2	S1-102-340-000		AIWA BADGE 30MM
3	S1-005-032-000		KNOB,SL BAND<C52EZB,C32EZB>
3	S0-503-200-100		KNOB,SL BAND<C52EZW>
4	S0-801-160-000		LENS,DIAL<C32EZB>
4	S0-801-160-100		LENS,DIAL<C52EZB,C52EZW>
5	S1-202-250-000		PLATE,DIAL<C32EZB>
5	S1-202-250-100		PLATE,DIAL<C52EZB,C52EZW>
6	S0-101-400-000		CAB,FRONT<C32EZB>
6	S0-101-400-100		CAB,FRONT<C52EZB>
6	S0-101-400-300		CAB,FRONT<C52EZW>
7	S0-503-250-000		KNOB,SL INDICATING
8	S0-503-280-000		PLATE,BAND<C32EZB>
8	S0-503-280-200		PLATE,BAND<C52EZB>
8	S0-503-280-300		PLATE,BAND<C52EZW>
9	S0-503-260-000		JOINT,KNOB SL
10	S1-700-730-000		GEAR,JOINT
11	S1-700-740-000		GEAR,TUN KNOB
12	S0-201-860-000		SPRING,KNOB
13	S1-018-002-000		SLEEVE,KNOB
14	S0-503-230-000		KNOB,RTRY TUN<C32EZB>
14	S0-503-230-000		KNOB,RTRY TUN<C52EZB>
14	S0-503-230-200		KNOB,RTRY TUN<C52EZW>
15	S1-102-250-000		HOLDER,GEAR TUN
16	S1-005-032-100		KNOB,RTRY FINE TUN<C52EZB>
16	S0-503-210-200		KNOB,RTRY FINE TUN<C52EZW>
17	S0-503-240-000		KNOB,RTRY VOL<C52EZB,C32EZB>
17	S0-503-240-100		KNOB,RTRY VOL<C52EZW>
18	S0-503-220-000		KNOB,RTRY TONE<C32EZB>
18	S0-503-220-000		KNOB,RTRY TONE<C52EZB>
18	S0-503-220-200		KNOB,RTRY TONE<C52EZW>
19	S1-010-011-700		BAR,ANT 10-100<C52EZB,C52EZW>
19	S1-010-011-300		BAR,ANT AM 80MM<C32EZB>
20	S2-010-012-200		ANT,ROD 7 SECTION
21	S0-901-090-200		GRIP,HANDLE<C52EZW>
21	S0-901-090-000		GRIP,HANDLE<C52EZB,C32EZB>
22	S1-018-002-100		RING,SPRING
23	S0-201-770-000		BAT,CONTACT -1
24	S0-201-780-000		BAT,CONTACT -2
25	S1-102-300-000		HOLDER,BATT
26	S1-010-021-900		SPKR,4 8 OHM 1W
27	S0-301-390-000		LID,BATT<C52EZB,C32EZB>
27	S0-301-390-200		LID,BATT<C52EZW>
28	S0-201-760-000		BAT,CONTACT +
29	S0-201-400-000		CAB,REAR<C32EZB>
29	S0-201-400-100		CAB,REAR<C52EZB>
29	S0-201-400-300		CAB,REAR<C52EZW>
⚠ 30	S1-001-000-200		PT,EI AC230/DC 4.5V
31	S0-901-180-000		AC SOCKET COVER
⚠ 32	S6-110-010-100		SOCKET AC
33	S1-005-032-700		JOINT,POLY VARI
34	S0-401-280-000		BTN,POWER<C52EZB,C32EZB>
34	S0-401-280-200		BTN,POWER<C52EZW>
35	S0-700-400-000		POINTER,TUNING
36	S1-700-750-000		GEAR,POINTER
37	S1-700-720-000		GEAR,POLY VARI
A	87-841-095-410		BINDING S-SCREW M3-8
B	87-251-074-410		BINDING S-SCREW(A) M2.6-8
C	87-410-316-010		FW,3-8-0.8
D	87-661-075-410		PAN-WASHER S-SCREW (A) M2.6-1
E	87-641-098-410		BINGING S-SCREW(A) 3-14
F	87-751-094-410		PAN SCREW M3-6
G	87-067-767-010		PAN M-SCREW M2.6-6
H	87-268-529-310		PAN M-SCREW M1.7-4

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

サービス技術ニュース	
番号	連絡内容
G一　一	
G一　一	
G一　一	

アイワ株式会社 〒110-8710 東京都台東区池之端1-2-11 ☎03(3827)3111 （代表）
AIWA CO.,LTD. 2–11, IKENOHATA 1–CHOME, TAITO-KU, TOKYO 110-8710, JAPAN TEL:03 (3827) 3111

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